

El Nino rains could aggravate earthquake fissures

Howard Yune, Napa Valley Register, 10-2-15

As Napa anticipates the arrival of winter rains driven by El Nino, the city is asking some residents to keep an eye on the ground as well.

In an announcement earlier this week, officials advised those living near fissures caused by last year's earthquake to watch for unusually high erosion during any winter storms. High levels of rainwater may enter ground cracks and erode them into visible fissures, according to Rick Tooker, community development director.

The risk to Napa properties is considered small because its soil composition differs from other areas – typically dry desert terrain – where the fissuring behavior, also known as piping, has been seen, Tooker said.

However, the city made the announcement after consulting with Ken Hudnut, a geophysicist whose studies revealed the unusually rapid slippage of the West Napa Fault – particularly in the Browns Valley area – during the months after Aug. 24, 2014.

Property owners who see unusual erosion, cracks or soil shifting along a fault line – especially near any improvements – are asked to contact the city Building Division at (707) 257-9540.

“In the abundance of caution because visible surface fissures resulting from an earthquake in Northern California are new – the South Napa earthquake represents the first occurrence of this since the 1906 earthquake – it is important to at least have folks keep an eye out for these conditions in Napa,” Tooker said in an email.

Quake-related fissures lying in swales, dips or other low spots where rainwater can collect stand the highest chance of piping, according to Hudnut, of the U.S. Geological Survey's Pasadena bureau. While most fissures have sealed in the 13 months since the Napa earthquake, a few remain and could widen again, he said Wednesday.

Erosion-related disruptions to building foundations or pipes are unlikely, but Hudnut advised homeowners to fill smaller cracks with clean soil and cover larger gaps with plastic sheeting to forestall tripping and injury hazards.

“It doesn't seem to be a high hazard” in Napa, he said. “It's more of a thought that as people see this happening, there could be ways to do a low-cost, do-it-yourself mitigation that could keep the problem from getting worse.”

Hudnut called his advice to Napa officials a result of long-range forecasts suggesting heavier-than-usual rainfall over the Bay Area this winter. The National Weather Service has placed the possibility of an El Nino weather pattern, which includes more precipitation, at more than 90 percent, though it has cautioned rain levels are unlikely to compensate for California's four-year drought in a single season.